

AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 3 and 7; and add new Claims 11-17 as follows.

LISTING OF CLAIMS

1. (currently amended) An ejector comprising:

a nozzle for defining therein a passage through which a drive fluid flows, the nozzle including a throat portion having a cross-sectional area that is smallest in the passage of the nozzle;

a pressure-increasing portion in which a fluid is sucked by entrainment of a jet flow of the drive fluid injected from the nozzle and is mixed with the drive fluid injected from the nozzle; and

an adjustment unit that is disposed to adjust both an opening degree of the throat portion and an opening degree of an outlet of the nozzle.

2. (original) The ejector according to claim 1, wherein the adjustment unit includes a needle valve that extends at least from the throat portion to the outlet of the nozzle.

3. (currently amended) The injector according to claim 2, wherein the needle valve is disposed to be moved in an axial direction of the nozzle to a position beyond an end of the outlet of the nozzle.

4. (original) The ejector according to claim 2, wherein:

the nozzle further includes an expansion portion downstream from the throat portion; and

the needle valve at least extends to an outlet of the expansion portion.

5. (original) The ejector according to claim 1, wherein:

the adjustment unit includes a needle valve extending at least from the throat portion to the outlet of the nozzle, and an actuator for moving the needle valve.

6. (original) The ejector according to claim 5, wherein the needle valve extends at least from an inlet of the nozzle to the outlet of the nozzle.

7. (currently amended) An ejector cycle comprising:

a compressor for compressing and discharging a refrigerant;

a first heat exchanger disposed for cooling the refrigerant discharged from the compressor;

an ejector including a nozzle for decompressing and expanding the refrigerant flowing from the first heat exchanger;

a gas-liquid separator for separating refrigerant from the ejector into gas refrigerant and liquid refrigerant;

a second heat exchanger disposed for evaporating liquid refrigerant from the gas-liquid separator, wherein:

the nozzle has a throat portion having a cross-sectional area that is smallest in a refrigerant passage of the nozzle; and

the ejector further includes a pressure-increasing portion in which the refrigerant from the evaporator is sucked by entrainment of a refrigerant flow injected from the nozzle and is mixed with the refrigerant injected from the nozzle, and an adjustment unit that is disposed to adjust both an opening degree of the throat portion and an opening degree of an outlet of the nozzle.

8. (original) The ejector according to claim 7, wherein the adjustment unit includes a needle valve that extends at least from the throat portion to the outlet of the nozzle.

9. (original) The ejector according to claim 7, wherein the needle valve is disposed to be moved in an axial direction of the nozzle to adjust both the opening degree of the throat portion and the opening degree of the outlet of the nozzle.

10. (original) The ejector according to claim 7, further comprising an actuator for moving the needle valve in an axial direction of the nozzle.

11. (new) The ejector according to claim 1, wherein the adjustment unit includes a needle valve that extends along a flow direction in the nozzle at least from the throat portion to the outlet of the nozzle in a manner that a distal end of the needle valve protrudes from the outlet of the nozzle, and an actuator for moving the needle valve in its axial direction to adjust the opening degrees of both the throat portion and the outlet of the nozzle.

12. (new) The ejector according to claim 11, wherein the needle valve has a first conical portion placed radial inside the throat portion and a second conical portion placed radial inside the outlet of the nozzle, the first and second conical portions being formed in different shapes.

13. (new) The ejector according to claim 7, wherein the adjustment unit includes a needle valve that extends along a flow direction in the nozzle at least from the throat portion to the outlet of the nozzle in a manner that a distal end of the needle valve protrudes from the outlet of the nozzle, and an actuator for moving the needle valve in its axial direction to adjust the opening degrees of both the throat portion and the outlet of the nozzle.

14. (new) The ejector according to claim 13, wherein the needle valve has a first conical portion placed radial inside the throat portion and a second conical portion placed radial inside the outlet of the nozzle, the first and second conical portions being formed in different shapes.

15. (new) The ejector according to claim 1, wherein the adjustment unit includes a needle valve that extends from the throat portion to an outlet end of the nozzle.

16. (new) The ejector according to claim 7, wherein the adjustment unit includes a needle valve that extends from the throat portion to an outlet end of the nozzle.

17. (new) An ejector comprising:

a nozzle for defining therein a passage through which a drive fluid flows, the nozzle including a throat portion having a cross-sectional area that is smallest in the passage of the nozzle;

a pressure-increasing portion in which a fluid is sucked by entrainment of a jet flow of the drive fluid injected from the nozzle and is mixed with the drive fluid injected from the nozzle; and

an adjustment unit that is disposed to adjust both an opening degree of the throat portion and an opening degree of an outlet area of the nozzle.